

semiconducting material, the group of tracks is formed on this first layer and a second layer of semiconducting material that covers these tracks is formed on the first layer, a total thickness of the first and second layers being equal to the thickness of the layer of semiconducting material.

22. (New) Process for manufacturing the detector according to claim 12, wherein a half layer of semiconducting material is deposited on two opposite faces of two successive sheets, and then the group of tracks is formed on one of the half layers and the sheets thus covered are assembled together to create a stack in which the layers alternate with the sheets.

#### IN THE ABSTRACT

Please delete the abstract on page 23 in its entirety and insert therefor:

#### ABSTRACT OF THE DISCLOSURE

A two-dimensional detector of ionizing radiation and a process for manufacturing the detector. The detector includes sheets emitting particles by interaction with ionizing radiation, semiconducting layers that alternate with the sheets and can be ionized by the particles, and groups of conducting tracks in contact with the layers. A created electric field is used to collect charge carriers generated in the layers due to interaction with particles, through the tracks. For example, the layer and the corresponding tracks are formed on each sheet and the sheets are then assembled together. The detector, as an example, is applicable to radiography and can achieve good X-ray detection efficiency and high spatial resolution at the same time.

Favorable consideration of this application, as presently amended, is respectfully requested.

The present Preliminary Amendment is submitted to place the above-identified application in more proper format under United States practice.

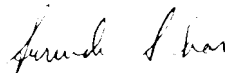
By the present Preliminary Amendment original Claims 1-11 are cancelled and new Claims 12-22 are presented for examination. New Claims 12-22 are deemed to be self-evident from the original disclosure, including original Claims 1-11, and thus are not deemed to raise any issues of new matter. The differences between new Claims 12-22 and original Claims 1-11 are deemed to at most broaden the scope of new Claims 12-22.

A new Abstract believed to be in more proper format under United States practice is also submitted herein.

The present application is believed to be in condition for a full and thorough examination on the merits. An early and favorable consideration of the present application is hereby respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Claims 1-11 (Cancelled)

Claims 12-22 (New).

IN THE ABSTRACT

(New).